

**STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Office of Conservation and Coastal Lands
Honolulu, Hawaii**

May 9, 2008

Board of Land and
Natural Resources
State of Hawaii
Honolulu, Hawaii

REGARDING: MEMORANDUM OF AGREEMENT Between the UNIVERSITY OF HAWAII and the DEPARTMENT OF LAND AND NATURAL RESOURCES to Provide Funding for Beach Management Plan for Kailua Beach, Oahu

APPLICANT: Office of Conservation and Coastal Lands and the University of Hawaii Sea Grant College Program

BACKGROUND/PROPOSED ACTION:

The University of Hawaii Sea Grant College Program (UH) has submitted a project proposal entitled "Kailua Beach Management Plan" for the purpose of developing a beach management plan for Kailua Beach, Oahu. The Department of Land and Natural Resources (DLNR) desires to utilize the technical resources of the university to assist with the development of a pilot beach management plan and combine their respective resources to better utilize existing technical support from UH as well as other local experts (**Exhibit 1**). The total project funds expended by the DLNR will be \$50,000.

DLNR desires to enter into a Memorandum of Agreement (MOA) with UH to develop a Kailua Beach and Dune Management Plan. The Plan has several objectives including:

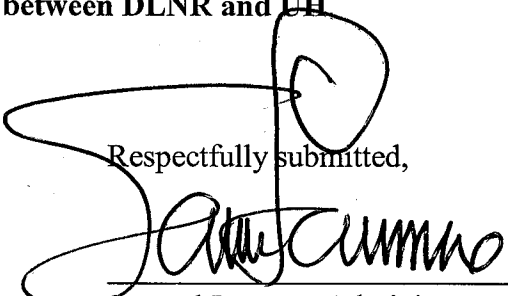
1. Enhance and protect the healthy sand-sharing system of Kailua Bay before it is negatively impacted by poor development practices;
2. Protect the cultural and natural resources of the coastal dunes;
3. Clearly identify the boundary between private property and public property;
4. Document issues negatively impacting the beach and dune ecosystem;
5. Reduce coastal hazard exposure of abutting owners;
6. Educate the general public (including abutting owners) on appropriate beach development practices;
7. Expand understanding of the potential impacts of climate change in Kailua;

8. Develop a system of rewards for abutting owners who initiate appropriate steps;
9. Foster a co-management arrangement with the Kailua community;
10. Plan future coastal development in Kailua in conformance with community priorities;
11. Monitor shoreline processes within the area to improve management plans;
12. Improve sand management practices at Kailua Beach Park;
13. Develop recommendations for dune and beach management.

RECOMMENDATION:

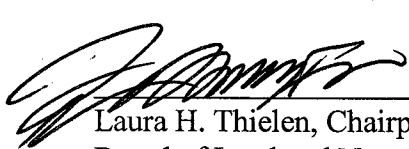
Based on the preceding analysis, staff recommends that the Board of Land and Natural Resources (Board) APPROVE this MOA between DLNR and UH

Respectfully submitted,



Samuel Lemmo, Administrator
Office of Conservation and Coastal Lands

Approved for submittal:



Laura H. Thielen, Chairperson
Board of Land and Natural Resources

Attachment: MOU and UH Sea Grant Proposal

Exhibit 1.
MOA Between DLNR and UH for a Kailua Beach Management Plan Project

STATE OF HAWAII
MEMORANDUM OF AGREEMENT
BETWEEN DEPARTMENT OF LAND AND NATURAL RESOURCES
AND THE UNIVERSITY OF HAWAII AT MANOA, SEA GRANT COLLEGE PROGRAM

THIS MEMORANDUM OF AGREEMENT entered into this ____ day of _____, 2008 (hereinafter referred to as "Agreement"), by and between the Department of Land and Natural Resources (hereinafter "DLNR") and the University of Hawaii on behalf of its Sea Grant College (hereinafter "UH") agree to the following .

WHEREAS, the DLNR and the Sea Grant College enter into the Agreement for the performance of the Kailua Beach Management Plan project ("Project"); and

WHEREAS, the DLNR is responsible for the protection of the State's Conservation District including beaches and coastal dunes;

WHEREAS, there is considerable interest in the conservation and preservation of important coastal lands including high value recreational areas like Kailua beach, Oahu;

WHEREAS, it is clear that additional special protection and management strategies are needed to ensure the protection of this area;

WHEREAS, the Kailua dune system has not been effectively managed, a single consistent and conservation-oriented management plan is needed for the Kailua dune system;

WHEREAS, the DLNR, under the Office of Conservation and Coastal Lands is involved with the protection and preservation of the coastal dune in Kailua Beach and additional financial and technical expertise are required to assist with this effort;

WHEREAS, UH is currently providing extension and technical support services to the DLNR in the area of shoreline and dune management in Kailua;

WHEREAS, the DLNR, and UH, may combine their respective resources to create a special project fund entitled the Kailua Beach Management Plan in order to better utilize existing technical support from UH as well as other local experts;

WHEREAS, the DLNR, and UH agree to providing these services;

NOW THEREFORE, in consideration of the promises contained in this Agreement, the DLNR, and UH agree as follows:

1. Scope of Services. All parties agree to the scope of services set forth in Attachment 1, which is hereby made part of this Agreement.

2. Time of Performance. All parties shall provide administrative support for a two-year period set forth in Attachment 2, which is hereby made a part of this Agreement.

3. Compensation. The DLNR shall provide one hundred (100) percent of the funding towards the project (\$50,000), in accordance with the Compensation and Payment Method set forth in Attachment 3, which is hereby made a part of this Agreement.

4. Other Terms and Conditions. This Agreement shall be subject to any other applicable terms and conditions set forth in Attachment 4, which is hereby made a part of this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed as of the day and year first above written.

DEPARTMENT OF LAND AND NATURAL RESOURCES

By: _____ Date: _____
LAURA H. THIELEN,
Chairperson

UNIVERSITY OF HAWAII

By: _____ Date: _____
KEVIN HANAOKA
Director, Office of Research Services

SCOPE OF SERVICES

The Kailua Beach and Dune management plan has several objectives. These include:

1. Enhance and protect the healthy sand-sharing system of Kailua Bay before it is negatively impacted by poor development practices;
2. Protect the cultural and natural resources of the coastal dunes;
3. Document issues negatively impacting the beach and dune ecosystem;
4. Reduce coastal hazard exposure of abutting owners;
5. Educate the general public (including abutting owners) on appropriate beach development practices;
6. Expand understanding of the potential impacts of climate change in Kailua;
7. Develop a system of rewards for abutting owners who take conservation appropriate steps;
8. Clearly identify the boundary between private property and public property;
9. Foster a co-management arrangement with the Kailua community;
10. Plan future coastal development in Kailua in conformance with community priorities;
11. Monitor shoreline processes within the area to improve management plans;
12. Improve sand management practices at Kailua Beach Park;
13. Develop recommendations for dune and beach management.

DELIVERABLES AND OUTCOMES

The Consultant shall at a minimum deliver the following products as part of this project:

1. A final report to the DLNR including a comprehensive dune and beach management plan for the project area. The final report shall be delivered to the DLNR within 18 months of acceptance of the contract.
2. A digital GIS-based product for zoning and land use overlays. The GIS product will be compatible with existing State and County GIS databases for eventual implementation into land use decision making. The GIS product will include:
 - a. Existing infrastructure including roadways and TMK boundaries.
 - b. Seaward property boundaries for all oceanfront parcels.
 - c. Shoreline or Mean high water.
 - d. Shoreline setback line.
 - e. Historical shoreline positions and rates of change.
 - f. FEMA Flood zones
 - g. State of Hawaii, Tsunami Evacuation Zones
 - h. Zoning overlays for dune and beach management.
3. A narrative summary with State and County implementation strategies for recommendations within the plan. These strategies shall be presented in a format that will facilitate the City and County of Honolulu Department of Planning and Permitting in legally adopting and utilizing the recommended zoning changes.

TIME OF PERFORMANCE

The DLNR and UH shall provide the services required under this Agreement from its date of execution, for an initial period of twenty four (24) months unless this Agreement is extended or sooner terminated as hereinafter provided. There is agreement that upon satisfactory performance of this initial Agreement, addendums for additional contract periods will be for twenty four (24) month periods.

BUDGET COMPENSATION AND PAYMENT METHOD

Budget: Period of Performance: July 1, 2008 – June 30, 2010

<u>Budget for Kailua Beach Management Plan Project</u>	<u>FY 08-10</u>
1. Consultant (Primary land use planning consultant)	\$40,000
2. Supporting research and consulting services	\$ 6,000
3. Meeting Fees and materials	\$ 1,250
4. Other Materials and Supplies	\$ 1,059
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Subtotal	\$48,309
5. Indirect costs (3.5% of Modified Total Direct Cost)	\$ 1,691
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Total	\$50,000

Budget Justification

- 1,2. These budget categories will cover consulting costs for the project for a twenty four-month period.
- 3,4. These budget categories will cover a portion of the project operational expenses of the project. \$1,250 is budgeted for various materials and supplies, and \$1,059 for other miscellaneous costs, including duplication, communication, special meetings, etc. The OCCL will also contribute towards other operational expenses on an as needed basis.
5. Indirect costs for State sponsored projects utilizing non-federal funds are 3.5% of Modified Total Direct Costs. This amounts to a total of \$1,691.

The **DLNR** shall pay UH \$50,000.00 for the services under this Agreement in accordance with the following:

1. This payment shall be made upon submission of an invoice. Excess funds resulting from a termination in service shall be returned to the DLNR prior to the end of the contract year.
2. Upon approval of the invoice, the DLNR shall issue a check for the funds to the University of Hawaii.

SPECIAL CONDITIONS

1. This Agreement may be extended by mutual agreement in writing by all parties.
2. Either party may terminate this Agreement for any reason upon thirty (30) days notice to the other party for good cause.
3. The Kailua Beach Management Plan will be administered by UH and the fund managed Mr. Dolan Eversole of UH on behalf of the DLNR during the contract period.
4. This agreement is limited in scope to the activities outlined in the March 24, 2008 project proposal entitled "Kailua Beach Management Plan" and referred to in Attachment 5.

PROJECT PROPOSAL

A PROPOSAL
SUBMITTED BY
UNIVERSITY OF HAWAII

TO: State of Hawaii
Hawaii Department of Land and Natural Resources
Office of Conservation and Coastal Lands

PROJECT TITLE: Kailua Beach Management Plan Project

PRINCIPAL INVESTIGATOR: Dolan Eversole

DEPARTMENT: Sea Grant College Program, SOEST

PROJECT PERIOD: 07/01/08 – 06/30/10

AMOUNT REQUESTED: \$50,000

AUTHORIZING

UNIVERSITY OFFICIAL



DATE: **MAR 24 2008**

GEORGETTE SAKUMOTO
Administrative Officer

Address:

University of Hawaii
Office of Research Services
2530 Dole Street
Sakamaki D200
Honolulu, HI 96822

Please ensure that all correspondence regarding this application and project are addressed to the Office of Research Services.

INTRODUCTION

The Department of Land and Natural Resources (DLNR), Office of Conservation and Coastal Lands (OCCL) intends to develop a beach and dune management plan for Kailua Beach on the eastern shoreline of Oahu. The project will include a partnership agreement between the OCCL and the University of Hawaii Sea Grant College Program (UH). The UH will consider bids from qualified consultants to assist the OCCL in the development of such a plan.

Kailua Beach is approximately 2.5 miles in length and is exposed to strong trade winds and their waves that approach from an angle. This generates alongshore currents ensuring that sand is shared along the length of the beach over the course of most years. Because the system is dominated by alongshore sand transport, it is important to manage the dune, beach, and offshore environments as a single, sand-sharing entity. Erosion stemming from sand deficiencies in one part will affect sand availability throughout the entire length of the beach.

The project area is in a developed urban area bounded by the northernmost sandy area of Kailua Beach at Castle Point, to the Kailua boat ramp in the south (Figure 1). From land to sea, the project area includes the seaward edge of private properties along Kailua Beach across the wet beach, and to the seaward edge of sand movement associated with beach dynamics (a point known as the "depth of closure" and identified offshore at the start of rocky seafloor). Kailua Beach is part of a larger Southeast Oahu Regional Sediment Management Project that is being developed and implemented in a joint Federal/State partnership.

Recent historical shoreline studies by the University of Hawaii (<http://www.soest.hawaii.edu/asp/coasts/index.asp>) have revealed that portions of Kailua Beach are expanding in size due to sand accretion on the shoreline. However, despite the apparent health of the beach ecosystem, seaward expansion and urbanization of the

KAILUA BEACH MANAGEMENT PLAN PROJECT

abutting Kailua community can easily outpace the rate of natural accretion. Norcross et al. (2004) documented that although the rate of shoreline movement was accretional ~0.5 m/yr since World War II, the open sandy beach actually narrowed over the same period due to encroaching vegetation and urbanization.

The Kailua dune system has not been effectively managed despite local sand abundance. At Kailua Beach Park, dunes have been abundantly augmented with dredged sand from Kaelepulu Stream mouth. This has been to the detriment of the adjoining beach which has been starved of sand and is now eroding. Elsewhere the dune has been alternately developed, inappropriately landscaped, or altogether removed in random fashion based on localized development styles. A single consistent and conservation-oriented management plan is needed for the Kailua dune system.

There are a number of direct threats related to urbanization that may expose Kailua beach to chronic erosion and eventual loss if not addressed now. These include:

1. Continued erosion in the Kailua Beach Park region due to poor sand management practices related to clearing of Kaelepulu Stream mouth;
2. Loss of recreational beach and sand impoundment due to aggressive vegetation growth on the dunes and beach;
3. Unauthorized landscaping and loss of access the shoreline area;
4. Accreted land claims, subdivision, and new development makai of existing improvements;
5. Insufficient construction setbacks to guarantee conservation and hazard mitigation.

The Kailua Beach and Dune management plan has several objectives. These include:

1. Enhance and protect the healthy sand-sharing system of Kailua Bay before it is negatively impacted by poor development practices;
2. Protect the cultural and natural resources of the coastal dunes;
3. Document issues negatively impacting the beach and dune ecosystem;
4. Reduce coastal hazard exposure of abutting owners;
5. Educate the general public (including abutting owners) on appropriate beach development practices;
6. Expand understanding of the potential impacts of climate change in Kailua;

KAILUA BEACH MANAGEMENT PLAN PROJECT

7. Develop a system of rewards for abutting owners who take conservation appropriate steps;
8. Clearly identify the boundary between private property and public property;
9. Foster a co-management arrangement with the Kailua community;
10. Plan future coastal development in Kailua in conformance with community priorities;
11. Monitor shoreline processes within the area to improve management plans;
12. Improve sand management practices at Kailua Beach Park;
13. Develop recommendations for dune and beach management and restoration for specific areas.

BACKGROUND

Studies show that nearly 25 percent of sandy beaches (17 miles) on the island of Oahu have been severely narrowed or lost over the past 70 years due to shoreline armoring. On the island of Maui, nearly 30 percent (9 miles) of the shoreline has experienced beach loss or significant narrowing. Beaches and dune systems are a critical component in the prevention of coastal erosion and flooding by serving as a natural buffer to prevent property damage from storm waves and undermining due to shoreline retreat. Beaches are also the backbone of Hawaii's visitor economy, which provides the majority of Hawaii's jobs and income. Beaches are also critical for ecological, spiritual, local recreational and cultural reasons.

Coastal management policies in Hawaii have not prevented the loss of miles of sandy beach and coastal land to the ravages of erosion and inappropriate development. The administration is poised to implement new, sustainable approaches to the problem of beach management provided that credible supporting scientific studies and data can be established on which to base decisions. This commitment takes on a critical light given global predictions for continued, possibly accelerated, sea-level rise and the ongoing focus of intense development along the Hawaiian shoreline. Hawaii's coastal resource managers are faced with the daunting prospect of managing the effects of erosion while simultaneously monitoring and regulating high-risk coastal development that often impacts the shoreline.

KAILUA BEACH MANAGEMENT PLAN PROJECT

The primary goal of the project is to develop a long-term beach and dune preservation plan for Kailua that reflects the state of knowledge resulting from scientific understanding of long-term beach trends in Kailua Bay and abutting shoreline areas. This project will eventually be integrated into an overall beach management district plan for the Kailua and windward area and provide a template for statewide action as shoreline data become available. The beach and dune preservation plan is the first step in a more comprehensive effort that will eventually involve the urbanized areas of Kailua to ensure that this community will continue to offer a spectacular beach ecosystem for the benefit of present and future generations.

EVALUATION

The Consultant shall be evaluated based on the following skills and competencies:

1. Ability to demonstrate working knowledge of existing issues, policies, and standards in coastal lands management;
2. Ability to work with on-line and digital data, and geographic information systems for map-making and resource planning;
3. Ability to demonstrate competence and familiarity in drafting and revising plans;
4. Ability to demonstrate skills and experience working with all stakeholders;
5. Ability to synthesize large amounts of information (positive and negative comments) and propose appropriate solutions that uphold the basic goals and objectives of beach conservation;
6. Ability to work with the UH, DLNR-OCCL, Office of Planning, County Planning Departments and other State, and Federal agencies, as well as other stakeholders;
7. Ability to conduct productive public meetings and to gain public participation in plan development by Kailua community members;
8. Ability to demonstrate an understanding of Hawaii land use and zoning laws;
9. Ability to manage conflicts in a positive manner;
10. Ability to understand the ecological aspects of coastal ecosystems;
11. Ability to understand potential impacts of climate change on beach systems;
12. Fee proposal (e.g., proposed hourly rate);
13. Ability to complete milestones to schedule;
14. Measured adherence to schedule and performance standards.

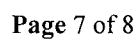
KAILUA BEACH MANAGEMENT PLAN PROJECT

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Figure 1. Kailua Project Area
(University of Hawaii Coastal Geology Group)



KAILUA BEACH MANAGEMENT PLAN PROJECT

IV. Budget: Period of Performance: July 1, 2008 – June 30, 2010

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